

FILE 'REGISTRY' ENTERED AT 15:14:03 ON 13 OCT 2009
EXP A-CYCL/CN
EXP A-CYCLODEXT/CN

L1 1 S E5
EXP LINOLIC/CN

L2 1 S E4
EXP ARACHADONIC/CN
EXP ARACHIDONIC/CN

L3 1 S E5
EXP VITAMIN F/CN

L4 1 S E3

FILE 'HCAPLUS' ENTERED AT 15:15:26 ON 13 OCT 2009

L5 6266 S L1

L6 67079 S L2-L4

L7 34 S L5 AND L6

L8 23 S L7 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> file registry		SINCE FILE	TOTAL
COST IN U.S. DOLLARS		ENTRY	SESSION
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STRUCTURE FILE UPDATES: 12 OCT 2009 HIGHEST RN 1187916-70-6
 DICTIONARY FILE UPDATES: 12 OCT 2009 HIGHEST RN 1187916-70-6

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 predicted properties as well as tags indicating availability of
 experimental property data in the original document. For information
 on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> exp α-cycl/cn
E1      1      A-CYANOTOLUENE/CN
E2      1      A-CYANOVINYL ACETATE/CN
E3      0 --> A-CYCL/CN
E4      1      A-CYCLAN/CN
E5      1      A-CYCLANOLINE/CN
E6      1      A-CYCLANOLINE CHLORIDE/CN
E7      1      A-CYCLO-A, B-HOMOFARNESYLIC ACID/CN
E8      1      A-CYCLO-12-METHOXYDIHYDROCOSTUNOLIDE/CN
E9      1      A-CYCLOAMYLOSE/CN
E10     1      A-CYCLOAMYLOSE-BENZENE COMPLEX/CN
E11     1      A-CYCLOWAODORIN/CN
E12     1      A-CYCLOBUTYL-A-(4-FLUOROPHENYL)-3-PYRIDINEMETHAN
OL/CN
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```
=> exp α-cyclodext/cn
E1      1      A-CYCLODETRIN, 6A-DEOXY-6A-((7-NITRO-2,1,3-BENZOXADIAZ
OL-4-YL)AMINO)-, COMPD. WITH TRICHLOROMETHANE (1:1)/CN
E2      1      A-CYCLODETRIN, 6A-DEOXY-6A-((7-NITRO-2,1,3-BENZOXADIAZ
OL-4-YL)AMINO)-, COMPD. WITH TRIIODOMETHANE (1:1)/CN
E3      0 --> A-CYCLODEXT/CN
E4      1      A-CYCLODEXTRAN DIALDEHYDE/CN
E5      1      A-CYCLODEXTRIN/CN
E6      1      A-CYCLODEXTRIN 2,3-MANNOEPOXIDE/CN
E7      1      A-CYCLODEXTRIN 6-TOSYLATE/CN
E8      1      A-CYCLODEXTRIN A, D-DIACID/CN
E9      1      A-CYCLODEXTRIN BRILLIANT YELLOW TETRAANION COMPLEX/CN
E10     1      A-CYCLODEXTRIN COMPD. WITH (±)-A-METHYLBENZEN
EMETHANOL (1:1)/CN
E11     1      A-CYCLODEXTRIN COMPD. WITH 3-IODOPIONIC ACID (1:1)/CN
E12     1      A-CYCLODEXTRIN COMPD. WITH 4-NITROPHENYL B-D-GALA
```

CTOSIDE (1:1)/CN

=> s e5

L1 1 A-CYCLODEXTRIN/CN

=> exp linolic/cn

E1 1 LINOLEYLHYDROXAMATE/CN
E2 1 LINOLEYLPHOSPHORYLETHANOLAMINE/CN
E3 0 --> LINOLIC/CN
E4 1 LINOLIC ACID/CN
E5 1 LINOLIC ACID DIETHANOLAMIDE/CN
E6 1 LINOLIC ACID DIMER DIGLYCIDYL ESTER/CN
E7 1 LINOLIC ACID PEROXIDE/CN
E8 1 LINOLIC ACID TRIMER/CN
E9 1 LINOLYL ALCOHOL/CN
E10 1 LINOLYL BROMIDE/CN
E11 1 LINOLYL MONOPHOSPHATE/CN
E12 1 LINOLYLALDEHYDE/CN

=> s e4

L2 1 "LINOLIC ACID"/CN

=> exp arachadonic/cn

E1 1 ARACETAL B/CN
E2 1 ARACETAL B 55LC/CN
E3 0 --> ARACHADONIC/CN
E4 1 ARACHAIN/CN
E5 1 ARACHAMIDE/CN
E6 1 ARACHIC ACID/CN
E7 1 ARACHIC ACID 2-(N,N-DIMETHYLAMINO)ETHYLAMIDE/CN
E8 1 ARACHIC ACID 3-(N,N-DIETHYLAMINO)PROPYLAMIDE/CN
E9 1 ARACHIC ACID CALCIUM SALT/CN
E10 1 ARACHIC ACID COPPER SALT/CN
E11 1 ARACHIC ACID METHYL ESTER/CN
E12 1 ARACHIC ALCOHOL/CN

=> exp arachidonic/cn

E1 1 ARACHIDONATE-SELECTIVE PHOSPHOLIPASE A2/CN
E2 1 ARACHIDONATE-SPECIFIC PHOSPHOLIPASE A2/CN
E3 0 --> ARACHIDONIC/CN
E4 1 ARACHIDONIC 5-LIPOXYGENASE/CN
E5 1 ARACHIDONIC ACID/CN
E6 1 ARACHIDONIC ACID (N,2,2-3H)ETHANOLAMIDE/CN
E7 1 ARACHIDONIC ACID Ω-1 HYDROXYLASE (MOUSE STRAIN C57BL/6
J CLONE WQ2J9-7 GENE CYP2J9)/CN
E8 1 ARACHIDONIC ACID Ω-1-HYDROXYLASE/CN
E9 1 ARACHIDONIC ACID Ω-HYDROXYLASE/CN
E10 1 ARACHIDONIC ACID 12S-LIPOXYGENASE/CN
E11 1 ARACHIDONIC ACID 15-LIPOXYGENASE/CN
E12 1 ARACHIDONIC ACID 18(R)-HYDROXYLASE/CN

=> s e5

L3 1 "ARACHIDONIC ACID"/CN

=> exp vitamin f/cn

E1 1 VITAMIN EA ACETATE/CN
E2 1 VITAMIN E2/CN
E3 1 --> VITAMIN F/CN
E4 1 VITAMIN F, ET ESTER/CN
E5 1 VITAMIN F, ME ESTER/CN
E6 1 VITAMIN G/CN

E7 1 VITAMIN GROUP B/CN
E8 2 VITAMIN H/CN
E9 1 VITAMIN H 2/CN
E10 1 VITAMIN H TRANSPORTER 1 (SACCHAROMYCES CEREVISIAE GENE VHT1)
/CN
E11 1 VITAMIN H'/CN
E12 1 VITAMIN H1/CN

=> s e3
L4 1 "VITAMIN F"/CN

=> file hcaplus
COST IN U.S. DOLLARS SINCE FILE TOTAL
SESSION
FULL ESTIMATED COST 22.36 22.58

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FILE LAST UPDATED: 12 Oct 2009 (20091012/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Aug 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Aug 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l1
L5 6266 L1

=> s 12-14
45047 L2
35612 L3
9 L4
L6 67079 (L2 OR L3 OR L4)

=> s 15 and 16
L7 34 L5 AND L6

=> s 17 and (PY<2004 or AY<2004 or PRY<2004)
24037864 PY<2004

4807020 AY<2004
4280275 PRY<2004
L8 23 L7 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> d 18 1-23 ti abs bib

L8 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Compositions for stain removal from teeth
AB A chewing gum, a confectionery or a consumable film composition containing a stain
removing complex including a stain removing agent having therapeutic properties and a cyclodextrin compound and methods of preparing and using the same to remove stains from dental material including teeth.
AN 2008:1534325 HCAPLUS <>LOGINID::20091013>>
DN 150:83441
TI Compositions for stain removal from teeth
IN Gebreselassie, Petros; Luo, Shiuh John; Boghani, Navroz
PA USA
SO U.S. Pat. Appl. Publ., 16pp., Cont.-in-part of U.S. Ser. No. 618,202.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI US 20080317681	A1	20081225	US 2008-74927	20080307 <--
US 20050008732	A1	20050113	US 2003-618202	20030711 <--
US 7390518	B2	20080624		
PRAI US 2003-618202	A2	20030711 <--		

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

L8 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Serum-free culture medium for culturing lymphocytes
AB This invention relates to a culture medium suitable for culturing lymphocytes in vitro, specifically a serum-free culture medium which can accelerate the multiplication of lymphocytes in vitro. The culture medium is composed of minimal medium (MM), interleukin-2, fatty acid, cholesterol, glyceride, and transferrin, and no serum; it has the equivalent efficiency as the culture medium containing human serum for multiplying lymphocytes, and has high activity for killing tumor cells.

AN 2005:1121546 HCAPLUS <>LOGINID::20091013>>
DN 143:402209
TI Serum-free culture medium for culturing lymphocytes
IN Ren, Xiubao
PA Beijing Tianrunshanda Biotech Co., Ltd., Peop. Rep. China
SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DT Patent
LA Chinese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----
PI CN 1566331	A	20050119	CN 2003-147874	20030627 <--
CN 1261562	C	20060628		
PRAI CN 2003-147874		20030627 <--		

L8 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Cosmetic composition comprising a complex of cyclodextrin and vitamin F
AB The invention concerns cosmetic and dermatol. compns. that contain complexes of vitamin F with α , β , or γ -cyclodextrin. Addnl. substances in the formulations are: silicone oils, moisturizers,

skin care substances, gelation agents, bactericides, antioxidants, sunscreens, emulsifiers, pigments, tanning agents, etc. Thus 0.1 mol α -cyclodextrin was mixed with 100 g water; 0.1 mol linolic acid was added, homogenized and stirred for 30 h at RT and for 8 h at 70°C; the product was dispersed in water, filtered, washed and dried under vacuum. A composition contained (weight/weight%): α -cyclodextrin-linolic acid complex 4.0; γ -cyclodextrin- α -tocopherol complex 1.5; octyl palmitate 2.5; octyl stearate 3.5; polyglycerol-2 sesquisostearate 2.0; cyclomethicone, dimethiconol 3.0; lauryl dimethicone 2.0; octyl dimethicone ethoxy glycoside, cyclomethicone 12.0; titanium dioxide 5.0; polymethylsilsesquioxane 1.0; zinc oxide 2.0; glycerin 2.0; methylparaben 0.1; sodium chloride 0.4; water 59.0.

AN 2004:402912 HCAPLUS <<LOGINID::20091013>>

DN 140:412001

TI Cosmetic composition comprising a complex of cyclodextrin and vitamin F

IN Regiert, Marlies; Kupka, Michaela

PA Wacker-Chemie GmbH, Germany

SO Eur. Pat. Appl., 17 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1419761	A1	20040519	EP 2003-26137	20031113 <--
	EP 1419761	B1	20051019		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	DE 10253042	A1	20040603	DE 2002-10253042	20021114 <--
	KR 2004042827	A	20040520	KR 2003-77579	20031104 <--
	US 20040096413	A1	20040520	US 2003-712703	20031112 <--
	JP 2004161775	A	20040610	JP 2003-385675	20031114 <--

PRAI DE 2002-10253042 A 20021114 <--

OSC.G 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Production method of cyclodextrin inclusion materials using marine or animal products

AB Title method comprise treatment of mixts. comprising lipophilic component-containing marine or animal products, starch, and lipid soluble solvents by addition of cyclodextrin synthetase. Thus, 5 g rice starch, 10 g salmon caviar, and 1 THU (based on 1 g starch) cyclodextrin synthetase were reacted in ethanol to give a cyclodextrin inclusion material showing good antioxidant property.

AN 2004:139298 HCAPLUS <<LOGINID::20091013>>

DN 140:182653

TI Production method of cyclodextrin inclusion materials using marine or animal products

IN Miwa, Shoji

PA Ishikawa Prefecture, Japan

SO Jpn. Kokai Tokyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004051866	A	20040219	JP 2002-213621	20020723 <--
	JP 4203578	B2	20090107		

PRAI JP 2002-213621

20020723 <--

L8 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Improving microdialysis extraction efficiency of lipophilic eicosanoids
AB Microdialysis recovery of the lipophilic analytes prostaglandin B2, leukotriene B4 and C4 was studied in vitro. Relative recovery (RR) through different com.-available microdialysis probes for prostaglandin B2 and leukotrienes was examined using different flow rates. The enhancing effect at different concns. of binding agents such as α , β , γ -cyclodextrins (α , β , γ -CD) on the microdialysis RR for different eicosanoids was evaluated. Small organic mols. such as ethanol, propylene glycol and DMSO were studied in terms of their effect on enhancing RR. Inclusion of arachidonic acid in either the perfusion fluid or the sample medium caused the microdialysis RR for these hydrophobic analytes to be increased.

AN 2003:938569 HCAPLUS <<LOGINID::20091013>>

DN 140:264652

TI Improving microdialysis extraction efficiency of lipophilic eicosanoids
AU Sun, Li; Stenken, Julie A.

CS Cogswell Laboratories, Department of Chemistry, Rensselaer Polytechnic Institute, Troy, NY, 12180-3590, USA

SO Journal of Pharmaceutical and Biomedical Analysis (2003), 33(5), 1059-1071

CODEN: JPBADA; ISSN: 0731-7085

PB Elsevier Science B.V.

DT Journal

LA English

OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Skin sanitizing compositions

AB The present invention relates to compns. and methods of sanitizing and moisturizing skin surfaces. A sanitizing and moisturizing gel contained EtOH 55, isopropanol 3, Biowax-754 0.4, Carbopol Ultrez-10 0.3, Carbowax PEG-200 0.26, propylene glycol 0.02, aminomethylpropanol 0.15, and perfume 0.1%, and water qs.

AN 2002:551533 HCAPLUS <<LOGINID::20091013>>

DN 137:114518

TI Skin sanitizing compositions

IN Sine, Mark Richard; Wei, Karl Shiqing; Jakubovic, David Andrew; Thomas, Cheyne P.; Dodd, Michael Thomas; Putman, Christopher Dean

PA The Procter & Gamble Company, USA

SO U.S., 14 pp., Cont. of U.S. Ser. No. 321,291.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6423329	B1	20020723	US 2000-504286	20000215 <--
PRAI	US 1999-249717	A2	19990212	<--	
	US 1999-120098P	P	19990216	<--	
	US 1999-321291	A2	19990527	<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

RE.CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Oxidative stability and nuclear magnetic resonance analyses of linoleic acid encapsulated in cyclodextrins

AB The effects of α - and β -cyclodextrin (CD) on the oxidative stability of linoleic acid (LA) at 35°C were studied by measuring headspace oxygen depletion in airtight 35-mL serum bottles. LA was encapsulated in α -CD or β -CD in an aqueous solution during homogenization at 8000 rpm for 1 min and then dried under vacuum for 60 h at room temperature. Headspace oxygen was measured by thermal conductivity gas chromatog. The rate of oxygen depletion for the control, which contained LA only, was 93.8 $\mu\text{mole/L}\cdot\text{h}$. The rates of oxygen depletion for LA, encapsulated at a 1:1 mol ratio (mole CD/mol LA) in α -CD and β -CD, were 13.8 and 111 $\mu\text{moles/L}\cdot\text{h}$, resp. When LA was encapsulated in α -CD and β -CD at a 2:1 mol ratio (moles CD/mol LA), the rates of oxygen depletion were 0.573 and 53.9 $\mu\text{moles/L}\cdot\text{h}$, resp. Although α -CD protected LA from reaction with oxygen at both ratios, the rate of oxygen depletion by LA encapsulated in β -CD at a 1:1 mol ratio was not statistically different from the control. β -CD protected LA from reaction with oxygen at a 2:1 mol ratio. ^1H NMR spectra of the complexes formed from 1:1 mol ratios of LA and CD indicated that LA was encapsulated in α -CD or β -CD.

AN 1997:681639 HCAPLUS <<LOGINID::20091013>>

DN 127:358219

OREF 127:70123a, 70126a

TI Oxidative stability and nuclear magnetic resonance analyses of linoleic acid encapsulated in cyclodextrins

AU Reichenbach, Wendy A.; Min, David B.

CS Department of Food Science, The Ohio State University, Columbus, OH, 43210, USA

SO Journal of the American Oil Chemists' Society (1997), 74(10), 1329-1333

CODEN: JAOCA7; ISSN: 0003-021X

PB AOCS Press

DT Journal

LA English

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Mucosal preparation containing physiologically active peptide

AB This invention related to a mucosal preparation obtained by blending a physiol. active peptide at least with a sorbefacient and a vasodilatory compound. Owing to the combined use of the sorbefacient with the vasodilatory compound, the absorption of any desired physiol. active peptide can be enhanced and thus it can be self-administered to a patient without giving any pain caused by parenteral injection. Therefore, it is highly useful as a preparation of a physiol. active peptide for prolonged administration. As the physiol. active peptide, use can be made of insulin, calcitonin, human PTH, somatostatin, glucagon, etc. As the sorbefacient, use can be made of bile acid salts, cyclodextrin, phospholipids, nonionic surfactants, higher fatty acids, etc. As the vasodilatory compds., use can be made of calcium channel inhibitors, prostaglandin E1, isosorbide nitrate, nitroglycerin, etc.

AN 1997:259764 HCAPLUS <<LOGINID::20091013>>

DN 126:242891

OREF 126:46901a, 46904a

TI Mucosal preparation containing physiologically active peptide

IN Yamamoto, Nakayuki; Ito, Teruomi

PA Asahi Kasei Kogyo Kabushiki Kaisha, Japan; Hisamitsu Seiyaku Kabushiki Kaisha; Yamamoto, Nakayuki; Ito, Teruomi

SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9706813	A1	19970227	WO 1996-JP2277	19960812 <--
	W: CA, CN, JP, KR, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	JP 11292787	A	19991026	JP 1995-208010	19950815 <--
	CN 1179723	A	19980422	CN 1996-192821	19960812 <--
	EP 845265	A1	19980603	EP 1996-926626	19960812 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 3824023	B2	20060920	JP 1997-509140	19960812 <--
PRAI	JP 1995-208010	A	19950815	<--	
	WO 1996-JP2277	W	19960812	<--	

OS MARPAT 126:242891

OSC.G 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI A method of producing a taxane-type diterpene

AB A simple method of producing a taxane-type diterpene by plant tissue culture is disclosed. Productivity can be improved by carrying out the culture in the presence of coronatines, a bacterium that produced the coronatines, a culture solution or a culture extract of such bacteria, cyclic polysaccharides, fatty acids, or an amino or imino derivative of jasmonic acids.

AN 1996:572123 HCAPLUS <>LOGINID::20091013>>

DN 125:219760

OREF 125:41103a, 41106a

TI A method of producing a taxane-type diterpene

IN Yukimune, Yukihito; Hara, Yasuhiro; Tan, Hiroaki; Tomino, Ikuo

PA Mitsui Petrochemical Industries, Ltd., Japan

SO Eur. Pat. Appl., 32 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 727492	A2	19960821	EP 1995-308498	19951127 <--
	EP 727492	A3	19961016		
	EP 727492	B1	20010131		
	R: DE, FR, GB, IT, NL				
	JP 08140690	A	19960604	JP 1994-291783	19941125 <--
	JP 3549594	B2	20040804		
	JP 08163991	A	19960625	JP 1994-312258	19941215 <--
	JP 09065889	A	19970311	JP 1995-218874	19950828 <--
	JP 3625908	B2	20050302		
	JP 08205882	A	19960813	JP 1995-301654	19951120 <--
	JP 3746550	B2	20060215		
PRAI	JP 1994-291783	A	19941125	<--	
	JP 1994-301179	A	19941205	<--	
	JP 1994-312258	A	19941215	<--	
	JP 1995-218874	A	19950828	<--	

OS MARPAT 125:219760

OSC.G 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)

L8 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Aggregation of polyunsaturated fatty acids in the presence of cyclodextrins

AB The aggregation behavior of the polyunsatd. fatty acids (PUFA) linoleic acid and arachidonic acid was studied in the presence of cyclodextrins (CDs). The influence of CD concentration on CMC of PUFA suggests that two CD mols. bind sequentially to one mol. of PUFA. Two equilibrium consts., K₁ representing the interaction of the first CD mol., and K₂, the interaction of the second, were determined by non-linear regression of the PUFA CMC vs. CD concentration data to an expression deduced from the reaction scheme in the equilibrium. The effect of pH and the structure of the CD on the equilibrium consts. was studied. It is postulated that the first CD mol. interacts with the carboxyl group of PUFA through hydrogen bonding when the fatty acid is protonated, while the second CD mol. binds to the hydrocarbon chain of the PUFA through hydrophobic interaction. The formation of hydrogen bonds was principally affected by the inner diameter of the CD, while the hydrophobic interactions were very strongly affected by the polarity of the CD group coating the inner channel. The relevance of the results for the development of enzyme assays involving fatty acids is discussed.

AN 1995:628687 HCAPLUS <<LOGINID::20091013>>

DN 123:50376

OREF 123:8923a,8926a

TI Aggregation of polyunsaturated fatty acids in the presence of cyclodextrins

AU Bru, Roque; Lopez-Nicolas, Jose M.; Garcia-Carmona, Francisco

CS Dep. Bioquim. Biol. Mol. "A", Univ. Murcia, Murcia, E-30001, Spain

SO Colloids and Surfaces, A: Physicochemical and Engineering Aspects (1995), 97(3), 263-9

CODEN: CPEAEH; ISSN: 0927-7757

PB Elsevier

DT Journal

LA English

OSC.G 16 THERE ARE 16 CAPLUS RECORDS THAT CITE THIS RECORD (16 CITINGS)

L8 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Entrapment of liquid lipids into powdery matrixes of saccharides and proteins

AB The emulsifying activity, the high stabilizing activity of the emulsion and the formation of a fine dense skin layer during drying were the properties of agents that effectively entrapped liquid lipids. Gum arabic and gelatin were effective. Addition of an agent having a property to a base agent lacking the property improved the entrapment. Oxidation of entrapped liquid lipid was retarded. However, the extent of retardation depended on the kind of lipids and the kind of entrapping agents. Oxidation processes of some combinations of lipids and entrapping agents were expressed by a kinetic model including oxygen diffusion through dehydrated entrapping agents. Et eicosapentaenoate was also stabilized by the entrapment.

AN 1995:485889 HCAPLUS <<LOGINID::20091013>>

DN 122:263834

OREF 122:48177a,48180a

TI Entrapment of liquid lipids into powdery matrixes of saccharides and proteins

AU Matsuno, Ryuichi; Imagi, Jun; Adachi, Shuji

CS Fac. Agric., Kyoto Univ., Kyoto, 606-01, Japan

SO Dev. Food Eng., Proc. Int. Congr. Eng. Food, 6th (1994), Meeting Date 1993, Volume Pt. 2, 1065-7. Editor(s): Yano, Toshimasa; Matsuno, Ryuichi; Nakamura, Kozo. Publisher: Blackie, Glasgow, UK.

CODEN: 61FFAL

DT Conference

LA English

L8 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Utilization of cyclodextrin as fat soluble compound carrier to serum-free culture of rat astrocytes

AB α -Cyclodextrin complexes with fat-soluble vitamins and unsatd. fatty acids were prepared and examined as replacements for bovine serum albumin as fat-soluble compound carriers on cultured rat astrocytes. In serum-supplemented medium, it was difficult to evaluate the effects of fat-soluble compds. in serum on cell growth. Therefore, serum-free chemical defined medium supplemented with growth factors, hormones, and nutrients was developed for rat astrocytes to evaluate these effects.

α -Cyclodextrin complexes with 3 vitamins (vitamin A acetate, E, and K1) and 3 fatty acids (linoleic, linolenic, and oleic acids) showed growth promoting activities for astrocytes in serum-free medium. Usually, supplementing fat-soluble compds. to a cell culture medium is very difficult, especially to a low or no protein medium, but α -cyclodextrin can replace albumin as a fat-soluble compound carrier in serum-free cell cultures.

AN 1993:579303 HCAPLUS <>LOGINID::20091013>>

DN 119:179303

OREF 119:32055a,32058a

TI Utilization of cyclodextrin as fat soluble compound carrier to serum-free culture of rat astrocytes

AU Nakama, Akihiko

CS Osaka City Inst. Public Health Environ. Sci., Osaka, 543, Japan

SO Annual Report of Osaka City Institute of Public Health and Environmental Sciences (1992), Volume Date 1991, 54, 48-53

CODEN: AOISDR; ISSN: 0285-5801

DT Journal

LA Japanese

L8 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Retarded oxidation of liquid lipids entrapped in matrixes of saccharides or proteins

AB Me linoleate (ML), linoleic acid (LA), and Et eicosapentaenoate (EE) were entrapped in saccharide and protein matrixes, and then stored at 37° in a desiccator controlled at 75% relative humidity. ML entrapped with α -cyclodextrin, maltodextrin, and pullulan was extremely resistant to autoxidn., but LA entrapped with maltodextrin and pullulan rapidly oxidized. LA entrapped with α -cyclodextrin was the most stable against oxidation. ML entrapped with gelatin or gum arabic was less resistant to autoxidn. than that entrapped with pullulan; there was little difference in the susceptibility to oxidation between ML and LA entrapped with gelatin or gum arabic. Egg albumin protected ML more effectively against oxidation than LA, while sodium caseinate protected LA more than ML. EE entrapped with pullulan was highly resistant to oxidation, 90% of the total lipid remaining after 35 days. The effect on the oxidation of diffusion of oxygen through the matrix was estimated. Retardation of oxidation

of the entrapped lipid can not be explained only by the effect of diffusion.

AN 1992:590442 HCAPLUS <>LOGINID::20091013>>

DN 117:190442

OREF 117:32869a,32872a

TI Retarded oxidation of liquid lipids entrapped in matrixes of saccharides or proteins

AU Imagi, Jun; Muraya, Koji; Yamashita, Daisuke; Adachi, Shuji; Matsuno, Ryuichi

CS Fac. Agric., Kyoto Univ., Kyoto, 606-01, Japan

SO Bioscience, Biotechnology, and Biochemistry (1992), 56(8), 1236-40

CODEN: BBBIEJ; ISSN: 0916-8451
DT Journal
LA English
OSC.G 35 THERE ARE 35 CAPLUS RECORDS THAT CITE THIS RECORD (35 CITINGS)

L8 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Powderization of liquid-state lipids
AB Liquid-state lipids (linoleic acid, Me linoleate, or Me oleate) were powderized by adsorption on gum arabic, starch, maltodextrin, α -cyclodextrin, maltose, glucose, or CM-cellulose. Lipids adsorbed on α -cyclodextrin, gum arabic, or CM-cellulose had high stability. The emulsifying activity of the lipid-adsorbent complex is described.

AN 1991:654556 HCAPLUS <>LOGINID::20091013>>

DN 115:254556

OREF 115:43273a,43276a

TI Powderization of liquid-state lipids

AU Matsuno, Ryoichi; Imagi, Jun

CS Agric. Coll., Kyoto Univ., Kyoto, Japan

SO New Food Industry (1991), 33(5), 57-64

CODEN: NYFIAM; ISSN: 0547-0277

DT Journal

LA Japanese

L8 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Specific adsorbents in isolation and purification of cyclodextrins

AB A number of synthesized affinity sorbents were tested to find methods for the separation of α -, β -, and γ -cyclodextrins (CDs) from one another and from acyclic dextrans. None of the gels retarded acyclic dextrans, whereas α -CD was specifically adsorbed onto supports derivatized with alkyl functions, β -CD was specifically adsorbed onto supports derivatized with phenyl or substituted Ph, and γ -CD was specifically adsorbed onto a gel derivatized with a naphthyl compound. It was evident that for achievement of binding capacities high enough for practical preparation of the CDs, various parameters such as the support material, its porosity, ligand, ligand concentration, temperature, and the composition of the mobile phase must be optimized.

AN 1989:453519 HCAPLUS <>LOGINID::20091013>>

DN 111:53519

OREF 111:9029a,9032a

TI Specific adsorbents in isolation and purification of cyclodextrins

AU Makela, Mauri; Mattsson, Pekka; Korpela, Timo

CS Dep. Biochem., Univ. Turku, Turku, SF-20500, Finland

SO Biotechnology and Applied Biochemistry (1989), 11(2), 193-200

CODEN: BABIEC; ISSN: 0885-4513

DT Journal

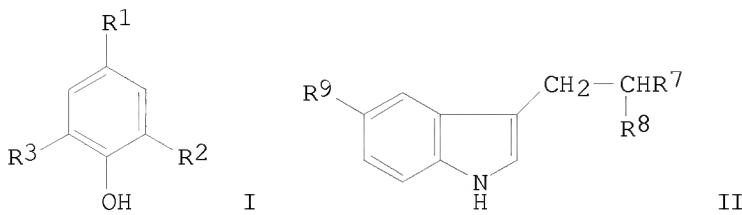
LA English

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L8 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Pharmaceuticals containing unsaturated fatty acids and stimulators for synthesis of prostaglandin and hydroxy fatty acids

GI



AB The title composition contains ≥ 1 unsat. C18-22 fatty acid derivs. containing 3-5 isolated double bonds and which may be Me or Et substituted at the 2, 3, 16-20 position, selected from the free terminal carboxylic acids, amides, or CO₂X derivs. (X = protecting group removable under acidic conditions, 1- or 2-lysophospholipid, metal cation, amine cation, cationic ion-exchanger). It also contains a stimulator with simultaneously stabilizing properties selected from ≥ 1 phenols I (R₁ = OH, CO₂H, CH₂CO₂H, CH:CHCO₂H, CH₂CHR₄R₅, CH(OH)CH₂NHR₆; R₂, R₃ = H, OH; R₄ = H, CO₂H; R₅ = H, NH₂; R₆ = H, Me, Et]; indoles II (R₇ = H, CO₂H; R₈ = H, NH₂; R₉ = H, OH); cysteine, homocysteine, or liponic acid wherein the alicyclic alkyl residue may be shortened by <4 CH₂-groups; a peptide containing ≤ 10 amino acids and in which ≥ 1 may be replaced by any of the above compds.; one of the above amino compds. substituted by C1-4 alkyl; a flavonoid substituted by ≥ 1 OH linked to a sugar residue; a salt of the above named compds.; as ester containing an alkoxy-containing residue, or its amide, mono- or dialkylamide. Addnl., it contains stabilizers selected from DMSO, EtOH, polyols, polyol esters, phospholipids, sugar lipids, cyclodextrins, proteins, cytochrome c derivs., or E-vitamins in solid or liquid form. A mixture containing 0.3 mL 0.03M

K phosphate buffer, 0.5 mg enzyme (from sheep sperm vesicles or homogenate of kidney medulla), 2.75 μ g 14C-arachidonic acid, and 0.5 mg I [R₁ = CH₂CH(NH₂)CO₂H, R₂ = R₃ = H] (stimulator) was incubated for 10 min at 37° and quenched with citric acid. The formation of total prostaglandin increased 5.5-fold over the amount formed in the absence of a stimulator; the relative amts. of PGE₂, PGF₂ α , and PGD₂ with stimulator were 81, 2, and 17%, resp., and 83, 2, and 15%, resp., in the absence of a stimulator.

AN 1988:443459 HCAPLUS <<LOGINID::20091013>>

DN 109:43459

OREF 109:7237a, 7240a

TI Pharmaceuticals containing unsaturated fatty acids and stimulators for synthesis of prostaglandin and hydroxy fatty acids

IN Weithmann, Klaus Ulrich

PA Hoechst A.-G., Fed. Rep. Ger.

SO Eur. Pat. Appl., 35 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 244832	A2	19871111	EP 1987-106520	19870506 <--
	EP 244832	A3	19891129		
	EP 244832	B1	19920624		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE DE 3615710 AT 77549 ES 2051705 DK 8702356	A1	19871126	DE 1986-3615710 AT 1987-106520 ES 1987-106520 DK 1987-2356	19860509 <-- 19870506 <-- 19870506 <-- 19870508 <--

DK 167518 B1 19931115
AU 8772641 A 19871112 AU 1987-72641 19870508 <--
AU 603574 B2 19901122
JP 62267222 A 19871119 JP 1987-110953 19870508 <--
ZA 8703299 A 19871230 ZA 1987-3299 19870508 <--
HU 44433 A2 19880328 HU 1987-2088 19870508 <--
HU 201671 B 19901228
CA 1302266 C 19920602 CA 1987-536688 19870508 <--
IL 82459 A 19940731 IL 1987-82459 19870508 <--
US 5043328 A 19910827 US 1989-304717 19890201 <--
PRAI DE 1986-3615710 A 19860509 <--
EP 1987-106520 A 19870506 <--
US 1987-46650 B3 19870507 <--

OS MARPAT 109:43459

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L8 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI The effect of bovine serum albumin on the synthesis of prostaglandin and incorporation of [3H]acetate into platelet-activating factor

AB As determined by RIA, bovine serum albumin (BSA) inhibited bradykinin (BK) (5 ng/mL)- and ionophore A 23187 (10 μ M)-stimulated synthesis of prostaglandins (PGs) by human embryo lung fibroblasts (IMR-90) in a concentration-dependent manner. Addition of [3H]arachidonate followed by extraction and

TLC showed that, in the presence of 2 mg/mL BSA, IMR-90 cells released essentially only fatty acids following stimulation with bradykinin. Little if any prostaglandin and no endoperoxide were detected. In the absence of BSA, .apprx.70% of the released label was detected as prostaglandin. α -Cyclodextrin, another trapper of fatty acid, inhibited PG synthesis in much the same way. BSA and α -cyclodextrin also inhibited prostacyclin synthesis in endothelial cells derived from the calf pulmonary artery. However, the inhibition of PG synthesis in these cells was not as complete as that in the IMR-90 cells. In contrast to the effect of the trappers on PG synthesis, BSA and α -cyclodextrin potentiated BK- and ionophore-stimulated incorporation of [3H]acetate into PAF in the endothelial cells. The labeled PAF was not released from the cells in either the presence or absence of the trappers, which suggests that BSA causes an increase in acetate-labeled cellular PAF by trapping released fatty acid.

AN 1987:569447 HCAPLUS <>LOGINID::20091013>>

DN 107:169447

OREF 107:27070h,27071a

TI The effect of bovine serum albumin on the synthesis of prostaglandin and incorporation of [3H]acetate into platelet-activating factor

AU Heinsohn, Carlotta; Polgar, Peter; Fishman, Jordan; Taylor, Linda

CS Sch. Med., Boston Univ., Boston, MA, 02118, USA

SO Archives of Biochemistry and Biophysics (1987), 257(2), 251-8

CODEN: ABBIA4; ISSN: 0003-9861

DT Journal

LA English

OSC.G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L8 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Stabilization of lipids by molecular inclusion: cyclodextrins and casein as antioxidants

AB The effects of cyclodextrin and casein inclusion on the kinetics of linoleic acid [60-33-3] and arachidonic acid [506-32-1] oxidation in dispersions containing lipoxygenase or Na bisulfite were evaluated

by monitoring free radical side reactions and O₂ consumption. The fatty acid peroxidation inhibition by casein was primarily by reversible inclusion

of the free polyunsatd. fatty acid. Cyclodextrins and casein inhibited both enzymic and nonenzymic peroxidn. Inhibitor consts. were relatively high unless the concentration of fatty acids was limiting.

AN 1986:477674 HCPLUS <>LOGINID::20091013>>
DN 105:77674
OREF 105:12597a,12600a
TI Stabilization of lipids by molecular inclusion: cyclodextrins and casein as antioxidants
AU Laakso, Simo
CS Dep. Biochem., Univ. Turku, Turku, 20500, Finland
SO Lipid Oxid.: Biol. Food Chem. Aspects, Contrib. LIPIDFORUM/SIK Symp. (1986), Meeting Date 1985, 165-70. Editor(s): Marcuse, Reinhard. Publisher: Scand. Forum Lipid Res. Technol., Goteborg, Swed.
CODEN: 55ATAL
DT Conference
LA English

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L8 ANSWER 19 OF 23 HCPLUS COPYRIGHT 2009 ACS on STN
TI Growth of an established line of mouse mammary tumor cells under serum-free conditions
AB An established line of mouse mammary tumor cells (MTD cells) were cultured in a serum-free medium consisting of a 1:1 mixture of Dulbecco's modified Eagle's medium and Ham's F-12 medium supplemented with bovine serum albumin (BSA), insulin, and transferrin. To promote cell attachment and spreading, culture dishes were precoated with plasma fibronectin isolated from fibrinogen. Under these serum-free conditions, MTD cells grew at a rate close to that attained by the serum-supplemented medium. Among the additives in the serum-free medium, BSA was replaced with oleic acid or a complex of oleic acid and α -cyclodextrin. Transferrin was replaced with Fe²⁺ or Fe³⁺. Addition of polyvinylpyrrolidone further improved the growth. Thus, MTD cells can be grown on a fibronectin-coated surface in a chemical defined medium with insulin as the only protein supplement. MTD cells grown under the serum-free conditions still retained the differentiated properties of the original MTD cells; i.e., the production of mouse mammary tumor virus in response to dexamethasone.

AN 1986:164689 HCPLUS <>LOGINID::20091013>>
DN 104:164689
OREF 104:25993a,25996a
TI Growth of an established line of mouse mammary tumor cells under serum-free conditions
AU Kawamura, Kazuo; Enami, Jumpei; Kohmoto, Kaoru; Koga, Mutuyosi
CS Sch. Med., Dokkyo Univ., Mibu, 321-02, Japan
SO Dokkyo Journal of Medical Sciences (1985), 12(2), 167-80
CODEN: DJMSDB; ISSN: 0385-5023
DT Journal
LA English

L8 ANSWER 20 OF 23 HCPLUS COPYRIGHT 2009 ACS on STN
TI Inhibition of lipid peroxidation by casein. Evidence of molecular encapsulation of 1,4-pentadiene fatty acids
AB The capability of cyclodextrins to form mol. inclusion complexes with linoleate resulted in inhibition of oxygenation in a lipoxygenase-linoleate model reaction. The inhibited rates were established instantaneously upon addition of the complexant and were maintained until linoleate was exhausted. Total cessation of the reaction was not obtained with cyclodextrins. Casein-inhibited reaction mixts. also exhibited these characteristics. Both casein and cyclodextrins protected linoleate against autoxidn., although they did not change free radical generation by xanthine oxidase or Fe²⁺ reactions. Since neither of the inhibitors affected the enzyme directly, casein may act, in analogy

with cyclodextrins, by forming linoleate complexes which reduce the oxidizable monomer fatty acids via a standing equilibrium and thus result in substrate limitation of reaction rates. Comparisons of lipid peroxidn. at acidic and alkaline pH, in the presence of increasing amts. of the complexants, detergent, and hydroperoxides, supported this view.

AN 1984:81327 HCPLUS <<LOGINID::20091013>>
DN 100:81327
OREF 100:12263a,12266a
TI Inhibition of lipid peroxidation by casein. Evidence of molecular encapsulation of 1,4-pentadiene fatty acids
AU Laakso, Simo
CS Dep. Biochem., Univ. Turku, Turku, SF-20500/50, Finland
SO Biochimica et Biophysica Acta, Lipids and Lipid Metabolism (1984), 792(1), 11-15
CODEN: BBLLA6; ISSN: 0005-2760
DT Journal
LA English
OSC.G 12 THERE ARE 12 CAPLUS RECORDS THAT CITE THIS RECORD (12 CITINGS)

L8 ANSWER 21 OF 23 HCPLUS COPYRIGHT 2009 ACS on STN
TI α -Cyclodextrin: a partial substitute for bovine serum albumin in serum-free culture of mammalian cells
AB The use was investigated of oleic acid- or linoleic acid- α -cyclodextrin inclusion complexes as albumin substitutes for mammalian cells. α -Cyclodextrin did not show any cytotoxic effects at 2g/L medium. Growth curves are shown for 2 types of cells. UMCL cells grew well enough in the cyclodextrin-complex-containing, serum-free medium, whereas HEL cells required a small amount of albumin in addition to cyclodextrin for abundant growth.

AN 1982:612006 HCPLUS <<LOGINID::20091013>>
DN 97:212006
OREF 97:35533a,35536a
TI α -Cyclodextrin: a partial substitute for bovine serum albumin in serum-free culture of mammalian cells
AU Yamane, Isao; Kan, M.; Minamoto, Y.; Amatsuji, Y.
CS Inst. Tuberculosis Cancer, Tohoku Univ., Sendai, 980, Japan
SO Cold Spring Harbor Conferences on Cell Proliferation (1982), 9(Growth Cells Horm. Defined Media, Book A), 87-92
CODEN: CSHCAL; ISSN: 0097-5230
DT Journal
LA English
OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L8 ANSWER 22 OF 23 HCPLUS COPYRIGHT 2009 ACS on STN
TI α -Cyclodextrin, a novel substitute for bovine albumin in serum-free culture of mammalian cells
AB The use of α -, β -, and γ -cyclodextrin (CD) in combination with unsatd. fatty acids as a serum substitute in mammalian cell cultures was examined by using a human lymphoblast cell line (UMCL) grown in RITC 56-1 medium supplemented with synthetic lecithin, cholesterol, galactose, and mannose and by using human diploid fibroblasts (HEL) grown in RITC 80-7 medium. On the basis of cytotoxic and cost considerations, α -CD was used for the expts. Both α -CD-oleic acid and α -CD-linoleic acid had growth-enhancing effects on UMCL cells up to 100 mg/L medium but exhibited toxic effects at higher concns. However, when 100 mg α -CD included with both fatty acids and 1000 mg free α -CD were added to 1 L of medium, stable and reproducible growth-promoting effects were observed. With HEL cells, growth similar to that in bovine serum albumin-supplemented medium was observed by addition of a concentrated α -CD complex to a final concentration of 10-20 mg/L.

AN 1982:100488 HCPLUS <<LOGINID::20091013>>

DN 96:100488

OREF 96:16453a, 16456a

TI α -Cyclodextrin, a novel substitute for bovine albumin in serum-free culture of mammalian cells

AU Yamane, Isao; Kan, Mikio; Minamoto, Yoshiki; Amatsuji, Yasuo

CS Res. Inst. Tuberc. Cancer, Tohoku Univ., Sendai, 980, Japan

SO Proceedings of the Japan Academy, Series B: Physical and Biological Sciences (1981), 57(10), 385-9

CODEN: PJABDW; ISSN: 0386-2208

DT Journal

LA English

OSC.G 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L8 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Stabilization of autoxidizable materials by means of inclusion

AB Adducts of α -dextrin (cyclohexaamyllose) (I), β -dextrin

(cycloheptaamyllose) (II) and deoxycholic acid (III) were prepared with linoleic acid (IV), linolenic acid (V), Me linolenate (VI), PhCH:CHCHO (VII), and vitamin A palmitate (VIII). They were found to be very resistant to autoxidation. The conventional procedure of preparing choleic acids yielded stable products with V and VIII. The products obtained from dextrans with IV, V, and VII needed purification. A heat treatment under high vacuum was found to be reliable for obtaining stable adducts free of oxidizable contamination. The principle of inclusion stabilization appears to be established by these examples and by the previous work on fatty acid stabilization by means of urea (C.A. 44, 11123f). II (8 g.) in 100 cc. O-free 50% aqueous EtOH treated at about 70° with 1.3 g. IV, the mixture stirred 4 hrs. at room temperature and centrifuged, and the solid dried over P2O5 at 0.5 mm. gave 7.7 g. II-IV adduct containing 7.28 g. IV (titrated in hot 50% aqueous EtOH with 0.05N KOH and phenolphthalein. II-IV adduct sublimed after rinsing with N under a high vacuum 9 hrs. at 120-5° gave 6.9% IV. Purified II-IV adduct (1.63 g.) in 100 cc. hot 50% aqueous EtOH extracted twice with 50-cc. portions trimethylpentane, the extract dried and evaporated, the residual oil brominated in Skellysolve F, and the resulting white crystals (75 mg.) repptd. from warm Et2O with Skellysolve F yielded 47 g. tetrabromostearic acid, m. 115-16.5°. II (1.6 g.) and 0.32 g. V treated in the usual manner in 20 cc. aqueous EtOH, the solids isolated and heated 17 hrs. at 122° and 0.5 mm. pressure, two 0.7-g. portions of the residue (each containing 67 mg. V) exposed to pure O in a Warburg apparatus (the manometers being filled with silicone fluid) at 37 ± 0.2° (one in a dry and one in a humid atmospheric) and the charge brominated in the usual manner gave eventually hexabromostearic acid. The II-VI adduct containing 10.8% VI was obtained in the same manner. II (5.0 g.) in 100 cc. H2O and 0.9 g. VII shaken 16 hrs. at room temperature, the solids isolated in the usual manner and heated 3 hrs. at 100-40° and 0.5 mm. gave an adduct containing 10.5% (9.6%) VII (determined as the 2,4-dinitrophenylhydrazone, m. 258-9°) and 0.3% (1.3%) PhCH:CHCO2H. I (2.0 g.) in 15 cc. O-free H2O warmed to 70° with IV in 15 cc. EtOH, the mixture kept 4 hrs. at room temperature, the crystals

isolated by centrifugation and dried, and a part heated to 130-60° during 16 hrs. at 0.5 mm. gave I-IV adduct (115 μ l. O uptake during 40 hrs. under standard conditions); another part of the crude product digested with 10 cc. EtOH gave I-IV adduct (760 μ l. O-uptake). III (6.0 g.) in 20 cc. absolute EtOH and 0.55 g. V in 5 cc. EtOH kept 16 hrs. at -5 to -10° gave III-V adduct containing 8.3% V. The adduct was refluxed 1 hr. with 8 times its weight of xylene, the III-xylene adduct filtered and washed with C6H6, the combined xylene and C6H6 solution evaporated,

the oily residue extracted with Skellysolve C, the extract evaporated, and the residue titrated with alkali to determine the acid content. III (1.0 g.) and

0.1 g. VIII in 4 cc. hot EtOH cooled to room temperature, held 12 hrs. at -3°, and the light yellow crystals filtered and dried in a high vacuum gave the III-VIII adduct containing 10.8% VIII.

AN 1956:23995 HCPLUS <>LOGINID::20091013>>

DN 50:23995

OREF 50:4858g-i, 4859a-e

TI Stabilization of autoxidizable materials by means of inclusion

AU Schlenk, Hermann; Sand, Donald M.; Tillotson, Jerry Ann

CS Univ. of Minnesota, Austin

SO Journal of the American Chemical Society (1955), 77, 3587-90

CODEN: JACSAT; ISSN: 0002-7863

DT Journal

LA Unavailable

OSC.G 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)